

January 19, 2023

Electronically Filed in TPUC Docket  
Room on January 19, 2023 at 2:08 p.m.

Karen H. Stachowski  
Senior Assistant Attorney General  
Financial Division, Consumer Advocate Unit  
Office of the Attorney General  
P.O. Box 20207  
Nashville, TN 37202

VIA Email: [karen.stachowski@ag.tn.gov](mailto:karen.stachowski@ag.tn.gov)

RE: Docket No. 22-00133 - *Petition of Tennessee Wastewater Systems, Inc. to Amend its Certificate of Convenience and Necessity to Include Hilltop Ridge Subdivision*

Dear Ms. Stachowski,

The following are responses to your MFR letter dated January 5, 2023, related to the CCN Petition in the above referenced docket.

**Rule 1220-04-13-.17(2)(a)** – Higher resolution maps have been electronically filed with the Commission.

**Rule 1220-04-13-.17(2)(d)2** – A copy of the renewed operator's license is included with this response.

**Rule 1220-04-13-.17(2)(d)4** -

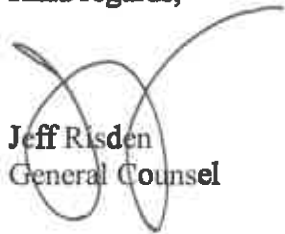
- (i) I have followed up with the TDEC office in East TN and they were not aware of the complaint. They are following up and will update the record in their database.
- (ii) TPUC was already aware of Mr. McCabe's complaint as a docket has been opened to address his concerns. His letter to TDEC does fall within the scope of the TPUC rule.

**Rule 1220-04-13-.17(2)(e)** – TWSI and the Consumer Advocate have discussed and resolved this concern.

**Rule 1220-04-13-.17(2)(e)8** – Updated tariff pages are included with this response.

Please let me know if you have any outstanding questions or concerns relating to this matter.

Kind regards,



Jeff Ridsen  
General Counsel

cc: Patsy Fulton – [patsy.fulton@tn.gov](mailto:patsy.fulton@tn.gov)  
Cole McCormick – [cole.mccormick@tn.gov](mailto:cole.mccormick@tn.gov)  
Kelly Cashman-Grams – [kelly.grams@tn.gov](mailto:kelly.grams@tn.gov)

STATE OF TENNESSEE  
DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
WATER AND WASTEWATER OPERATOR CERTIFICATION BOARD

ID. NO. 15046  
EXPIRATION DATE 12/31/2023

THIS IS TO CERTIFY THAT  
Tracy A. Nichols  
IS IN GOOD STANDING WITH THE BOARD FOR THE CLASSIFICATIONS  
LISTED:

BNS, CS2



**WASTEWATER UTILITY SERVICE****SECTION 4 – RESIDENTIAL RATES SHEET**

	<b>Base</b>	<b>Escrow</b>	<b>Bonding</b>	<b>Environmental Rider (D)</b>	<b>Total</b>
<b>Rate Class 1</b>	<b>\$ 40.48</b>	<b>\$ 7.27</b>	<b>\$0.12 (R)</b>	<b>\$0.00</b>	<b>\$ 47.87(R)</b>
<b>Rate Class 2</b>	<b>\$ 40.48</b>	<b>\$ 7.27</b>	<b>\$0.12 (R)</b>	<b>\$0.00</b>	<b>\$ 47.87(R)</b>
<b>Rate Class 5</b>	<b>\$ 36.66</b>	<b>\$ 5.69</b>	<b>\$0.12 (R)</b>	<b>\$0.00</b>	<b>\$ 42.47(R)</b>
<b>Rate Class 6</b>	<b>\$ 36.66</b>	<b>\$ 5.69</b>	<b>\$0.12 (R)</b>	<b>\$0.00</b>	<b>\$ 42.47(R)</b>
<b>Rate Class 9</b>	<b>\$ 20.55</b>	<b>\$ 3.39</b>	<b>\$0.12 (R)</b>	<b>\$0.00</b>	<b>\$ 24.06*(R)</b>

\* Southridge customers will have a pass-through treatment cost assessed to their monthly bill. The pass-through treatment cost is calculated using the water meter readings as provided to TWSI by the East Montgomery Water Co. and the multiplier charged to TWSI by Clarksville Gas and Water to provide wastewater treatment. This cost will be filed annually with TPUC in June and effective upon approval. The current pass through treatment cost is 0.0096296082 per gallon.

\*\* Each condominium unit will be billed as a residential customer and be individually billed.

\*\*\* Customers in the City of Coopertown will be billed a 3% franchise fee (applied to the base rate only).

\*\*\*\* The bonding fee will be updated with an annual filing with TPUC in August and effective upon approval.

**Fees:**

Non-Payment – 5% of total bill amount

Disconnection – \$40

Reconnection – \$50

Returned Check (NSF Fee) – \$25

Returned ACH - \$25

Capacity Reservation Fee – \$10 per month (See Rules and Regulations for Explanation)

Credit Card Convenience Fee: 2.45% with a \$1.25 minimum fee (R)(N)

City of Coopertown Franchise Fees: 3%

**Issued: December 13, 2022**

**Effective: December 13,  
2022**

**Issued by: Matthew Nicks, President**

**WASTEWATER UTILITY SERVICE****SECTION 6 – COMMERCIAL RATE SHEETS****COMMERCIAL RATES SHEET  
without FOOD SERVICE**

The monthly sewer charge per customer is based on the daily design flow expected from the type of establishment being served. The utility will periodically check actual flow to determine whether billing adjustments will need to be made.

	Base	Escrow	Bonding	Environmental Rider	Total
Tier 1 (0 - 300 GPD)	\$95.93	\$14.87	\$0.12(R)	\$0.00	\$110.92(R)
Tier 2.1 (301 - 400 GPD)	\$115.07	\$17.98	\$0.12(R)	\$0.00	\$133.17(R)
Tier 2.2 (401 - 500 GPD)	\$134.21	\$21.09	\$0.12(R)	\$0.00	\$155.42(R)
Tier 2.3 (501 - 600 GPD)	\$153.34	\$24.21	\$0.12(R)	\$0.00	\$177.67(R)
Tier 2.4 (601 - 700 GPD)	\$172.48	\$27.32	\$0.12(R)	\$0.00	\$199.92(R)
Tier 2.5 (701 - 800 GPD)	\$191.62	\$30.43	\$0.12(R)	\$0.00	\$222.17(R)
Tier 2.6 (801 - 900 GPD)	\$210.76	\$33.54	\$0.12(R)	\$0.00	\$244.42(R)
Tier 2.7 (901 - 1,000 GPD)	\$229.89	\$36.66	\$0.12(R)	\$0.00	\$266.67(R)
Tier 3.1 (1,001 - 2,000 GPD)	\$381.18	\$56.37	\$0.12(R)	\$0.00	\$437.67(R)
Tier 3.2 (2,001 - 3,000 GPD)	\$533.29	\$76.11	\$0.12(R)	\$0.00	\$609.52(R)
Tier 3.3 (3,001 - 4,000 GPD)	\$685.41	\$95.84	\$0.12(R)	\$0.00	\$781.37(R)
Tier 3.4 (4,001 - 5,000 GPD)	\$837.53	\$115.57	\$0.12(R)	\$0.00	\$953.22(R)
Tier 3.5 (5,001 - 6,000 GPD)	\$989.64	\$135.31	\$0.12(R)	\$0.00	\$1,125.07(R)
Tier 3.6 (6,001 - 7,000 GPD)	\$1,141.76	\$155.04	\$0.12(R)	\$0.00	\$1,296.92(R)
Tier 3.7 (7,001 - 8,000 GPD)	\$1,293.88	\$174.77	\$0.12(R)	\$0.00	\$1,473.77(R)
Tier 3.8 (8,001 - 9,000 GPD)	\$1,446.00	\$194.50	\$0.12(R)	\$0.00	\$1,640.62(R)
Tier 3.9 (9,001 - 10,000 GPD)	\$1,598.11	\$214.24	\$0.12(R)	\$0.00	\$1,812.47(R)
Unknown 25,000 GPD	\$ 3,879.87	510.23	\$0.22(R)	\$0.00	\$ 4,390.32(R)

**Excess water usage**

Additional surcharges will apply when customers exceed their expected design flows. For any month that a customer's water meter reading exceeds the expected design flow, the following surcharges will apply:

If usage exceeds 10,000 gallons per day, the charge will be \$1628.40 plus applicable escrow, bonding, and rate rider amount plus \$171.85 per 1000 gallons.

**Issued: December 13, 2022**

**Effective: December 13,  
2022**

**Issued by: Matthew Nicks, President**

**WASTEWATER UTILITY SERVICE**

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If the water meter readings exceed the design flow for any three consecutive months, the monthly charge will be revised to reflect the increased usage and any capital costs associated with increasing the capacity of the system will be paid by the customer.

**Fees:**

Nonpayment – 5%

Disconnection - \$40

Reconnection - \$50

Returned Check - \$25

Returned ACH - \$25

City of Coopertown Franchise Fees: 3%

Credit Card Convenience Fee: 2.45% with \$1.25 minimum fee (R)(N)

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**Issued: December 13, 2022**

**Effective: December 13,  
2022**

**Issued by: Matthew Nicks, President**

**WASTEWATER UTILITY SERVICE****COMMERCIAL RATES SHEET  
with FOOD SERVICE**

The monthly sewer charge per customer is based on the design daily flow expected from the type of establishment being served. The utility will periodically check actual flow to determine whether billing adjustments will need to be made.

	Base	Escrow	Bonding	Environmental Rider	Total
Tier 1 (0 - 300 GPD)	\$127.88	\$19.82	\$0.12	\$0.00	\$147.92(R)
Tier 2.1 (301 - 400 GPD)	\$151.18	\$23.17	\$0.12	\$0.00	\$174.47(R)
Tier 2.2 (401 - 500 GPD)	\$174.49	\$26.51	\$0.12	\$0.00	\$201.12(R)
Tier 2.3 (501 - 600 GPD)	\$197.80	\$29.85	\$0.12	\$0.00	\$227.77(R)
Tier 2.4 (601 - 700 GPD)	\$221.11	\$33.19	\$0.12	\$0.00	\$254.42(R)
Tier 2.5 (701 - 800 GPD)	\$244.42	\$36.53	\$0.12	\$0.00	\$281.07(R)
Tier 2.6 (801 - 900 GPD)	\$267.73	\$39.87	\$0.12	\$0.00	\$307.72(R)
Tier 2.7 (901 - 1,000 GPD)	\$291.03	\$43.22	\$0.12	\$0.00	\$334.37(R)
Tier 3.1 (1,001 - 2,000 GPD)	\$475.73	\$67.97	\$0.12	\$0.00	\$543.82(R)
Tier 3.2 (2,001 - 3,000 GPD)	\$661.37	\$92.73	\$0.12	\$0.00	\$754.22(R)
Tier 3.3 (3,001 - 4,000 GPD)	\$847.00	\$117.50	\$0.12	\$0.00	\$964.62(R)
Tier 3.4 (4,001 - 5,000 GPD)	\$1,032.63	\$142.27	\$0.12	\$0.00	\$1,174.92(R)
Tier 3.5 (5,001 - 6,000 GPD)	\$1,218.26	\$167.04	\$0.12	\$0.00	\$1,385.52(R)
Tier 3.6 (6,001 - 7,000 GPD)	\$1,403.89	\$191.81	\$0.12	\$0.00	\$1,595.82(R)
Tier 3.7 (7,001 - 8,000 GPD)	\$1,589.53	\$216.57	\$0.12	\$0.00	\$1,806.22(R)
Tier 3.8 (8,001 - 9,000 GPD)	\$1,775.16	\$241.34	\$0.12	\$0.00	\$2,016.62(R)
Tier 3.9 (9,001 - 10,000 GPD)	\$1,960.79	\$266.11	\$0.12	\$0.00	\$2,227.02(R)
Unknown 25,000 GPD	\$4,745.27	\$637.63	\$0.12	\$0.00	\$5,383.12(R)

**Excess water usage**

Additional surcharges will apply when customers exceed their expected design flows. For any month that a customer's water meter reading exceeds the expected design flow, the following surcharges will apply:

**Issued:** December 13, 2022

**Effective:** December 13, 2022

**Issued by:** Matthew Nicks, President

**WASTEWATER UTILITY SERVICE**

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If usage exceeds 10,000 gallons per day, the charge will be \$1997.95 plus applicable escrow, bonding, and rate rider amount plus \$210.40 per 1000 gallons.

If the water meter readings exceed the design flow for any three consecutive months, the monthly charge will be revised to reflect the increased usage and any capital costs associated with increasing the capacity of the system will be paid by the customer.

**Fees:**

Nonpayment – 5%

Disconnection - \$40

Reconnection - \$50

Returned Check - \$25

Returned ACH - \$25

City of Coopertown Franchise Fees: 3%

Credit Card Convenience Fee: 2.45% with \$1.25 minimum fee

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2022**

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**WASTEWATER UTILITY SERVICE**

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**COMMERCIAL RATES SHEET  
CABINS**

The monthly sewer charge per customer is based on the square footage of the cabin as recorded with the Register of Deeds office.

	Base	Escrow	Bonding	Environmental Rider	Total
Small 0-2000	\$60.85	\$13.15	\$0.12	\$0.00	\$74.12(R)
Medium 2001-4000	\$69.68	\$16.32	\$0.12	\$0.00	\$86.12(R)
Large 4001-6000	\$82.44	\$19.56	\$0.12	\$0.00	\$102.12(R)
Extra Large 6001+	\$102.07	\$22.93	\$0.12	\$0.00	\$125.12(R)

**Fees:**

Nonpayment – 5%

Reconnection - \$50

Disconnection - \$40

Returned Check - \$25

Returned ACH - \$25

Credit Card Convenience Fee: 2.45% with \$1.25 minimum fee

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**Issued: December 13, 2022****Effective: December 13,  
2022****Issued by: Matthew Nicks, President**

# Hilltop Ridge Treatment Facility Wastewater Treatment, STEP System, Collection and Drip Dispersal Plans MONTGOMERY COUNTY, TN

## SOP - \_\_\_\_\_ Sewer Plans

**Drawing Index**

Sheet No.	Title
C0.0	Cover Sheet
C0.1	Master Plan
C1.0 - C1.1	Wastewater Collection Plans
C2.0 - C2.4	Details



LOCATION MAP  
NOT TO SCALE

**Floodplain Note:**

No Portion Of This Site Lies Within The 100 Year Flood Plain  
Per F.E.M.A. Community Panel No. 47128C03352, Dated  
1/18/21.

**Total Site Land Data:**

Total Area = 154.00± Acres

**STEP Land Data:**

Wastewater Lot 1 Area = 3.48± Acres

**Yard Requirements:**

Front: 30'

Side: 15'

Rear: 30'

**Deed Reference:**

The property shown herein is Tax Map:  
Map 100, Parcel 01.00 Civil District, 17, Magisterial District in  
Montgomery County, as recorded in Record Bk. 2118, Pg 2832.

**STEP Design:**

Design Flow = 68 Lots x 300 gpd = 20,400 gpd  
Design Loading Soil Rate = 0.2 gal/ft<sup>2</sup>  
Required Land Application Area = 2.34 Acres  
Proposed Land Application Area = 2.34 Acres  
Required 80% Land Reserve Area = 1.17 Acres  
Proposed Land Reserve Area = 1.21 Acres  
Total Required Land Application + Reserve = 3.51 Acres  
Total Provided Land Application + Reserve = 3.55 Acres

**Contacts:**

**Engineer:**

Site Engineering Consultants, Inc.  
850 Middle Tennessee Blvd.  
Memphis, TN 37125  
Phone: (901) 680-7801  
Contact: Jamie Reed

**East Montgomery  
Utility District:**

5186 Hwy 41-A South  
Clarksville, TN 37043  
Phone: (615) 368-1021

**Tennessee Wastewater  
Systems, Inc.:**

848 Aviation Parkway  
Smyrna, TN 37167  
Contact: Matt Nicks  
Phone: (615) 423-3887

**SEC, Inc. SITE ENGINEERING CONSULTANTS**

ENGINEERING • SURVEYING • LAND PLANNING  
LANDSCAPE ARCHITECTURE  
850 MIDDLE TENNESSEE BOULEVARD MEMPHIS, TENNESSEE 37125  
PHONE: (901) 680-7901 E-MAIL: JREED@SEC-CIVIL.COM FAX: (901) 680-2567

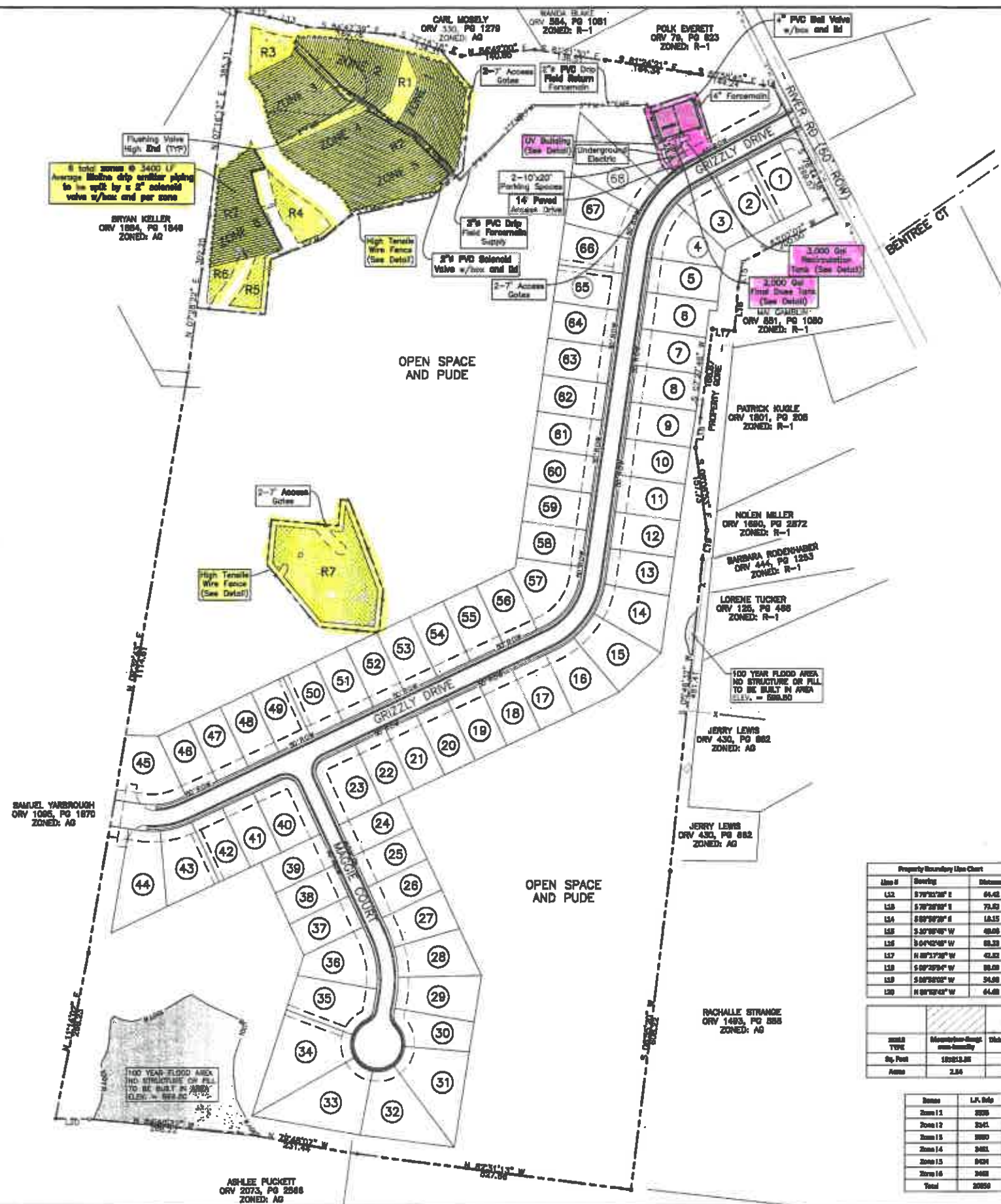
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By: James F. Reed III Date: Jan. 31, 2022  
James F. Reed III, P.E. TN. Reg. #109038



Sheet C0.0  
Hilltop Ridge Treatment Facility  
S.E.C. Project #21506  
Date: 01-26-2022

ADENUS SOLUTIONS GROUP 849 AVIATION PARKWAY SMYRNA, TN 37167





Legend:			
	DOCK, CONCRETE MONORAIL		DISCHARGE
	IRON PIN SET (A.P.C.)		HAZARDOUS WASTE
	IRON PIN FOUND (A.P.C.)		NON ACCEPTABLE HAZARDOUS WASTE/SLURRY
	WEEK, HIGH POST		NO SIGN
	SORT, GENDER SUPPORT		PROPOSED HIGH POST
	WASHABLE (FERT & PHOS)		CONCRETE BOLLARD
	DOCK, GATE IN (STRONG BOND)		WHEEL STOP
	DOCK, GATE/ONE WAY		CONCRETE BOLLARD
	DOCK, TELEPHONE BOOTH		EXTENDED CURB
	DOCK, ONE WAY		CURB & GUTTER
	ELECTRICAL ENCLOSURE		TRAFFIC ARROW
	DOCK, WATER METER		TURN LANE ARROW
	DOCK, UTILITY POLE		REPAIR SIGN
	DOCK, FIRE MOUNTAIN		DRAINAGE STRUCTURE, SEPARATION
	PORT, INDOOR VALVE		DRAINAGE PIPE, DISCHARGE
	SLOW GUT VALVE		RP RPP
	REPAIR		WINDY FLOW ARROW
	REPAIR, FIRE DEPT. CONNECTION		DACT FLYER PROTECTION
	CONCRETE TUBULAR BLOW		PROPOSED SPOT BLASTING
	DOUBLE DETECTOR CHECK VALVE		DOCK, SPOT BLASTING
	FIRE DEPT. CONNECTION		SEWER/STORM FLOW DIRECTION
	FIRE INTERVENT		GATE ARROW
	GATE VALVE & BOX		GATE DAUGHT
	WATER METER		AREA ROAD
	GAS METER		HANDRAIL
	DRINKING TAP		WINDY REPAIR
	DRINKING CUP/STAIN		CONCRETE BOLLARD
	WASHABLE		TYPE-3-CONCRETE

Property Boundary Line Chart			EXISTING PHONE	
Line #	Bearing	Distance		OH
L1	S 79°51'20" E	64.61	EXISTING ELECTRIC	
L2	S 79°25'00" E	72.83	PROPERTY LINE	
L3	S 79°25'00" E	72.83	ENCROACHMENT	
L4	S 18°04'20" W	49.03	RIGHT-OF-WAY	TC&W
L5	S 04°02'40" W	82.29	BROOKEN CONTROL	ST
L6	S 07°23'00" W	42.32	SILT POND	ST
L7	S 09°39'40" W	38.89	BROOKEN DIL	
L8	S 08°06'00" W	54.86	EXISTING FENCELINE	
L9	N 09°20'40" W	64.65	EXISTING FENCELINE	
L10	N 09°20'40" W	64.65	MINIMAL BUILDING	
L11	N 09°20'40" W	64.65	EXTENDING LINE	
L12	N 09°20'40" W	64.65	PROPERTY BOUNDARY	
L13	N 09°20'40" W	64.65	EXISTING GAS LINE	QAS
L14	N 09°20'40" W	64.65	PROPOSED GAS LINE	QAS
L15	N 09°20'40" W	64.65	EXISTING STORM	STN
L16	N 09°20'40" W	64.65	PROPOSED STORM	STN
L17	N 09°20'40" W	64.65	EXISTING CONTROL LINE	SO1
L18	N 09°20'40" W	64.65	PROPOSED CONTROL LINE	SO1
L19	N 09°20'40" W	64.65	EXISTING SURVEY CORNER	SS
L20	N 09°20'40" W	64.65	PROPOSED SURVEY CORNER	SS
L21	N 09°20'40" W	64.65	EXISTING WATER	W
L22	N 09°20'40" W	64.65	PROPOSED WATER	W
L23	N 09°20'40" W	64.65	EXISTING FM	FM
L24	N 09°20'40" W	64.65	PROPOSED FM	FM
L25	N 09°20'40" W	64.65	EXISTING FLOOR	FW

**Boundary, Topo and Lot  
Layout provided by others.**

## MATCHLINE SHEET C1.1

**Hilltop Ridge Treatment Facility**  
Montgomery County, Tennessee

<b>DRAWING NO.</b>	
<b>DATE</b> 1-28-2012	
<b>SHEET#</b> 1 OF 1	
<b>FILE NAME:</b> r:\new\magnatop_sdp.dwg	
<b>SCALE:</b> 1"=50'	
<b>JOB NO.</b> 21506	
<b>TITLE:</b>	

**C1.0**

[illegible]

Legend:			
	CITY CONCRETE BOUNDARY		HIGHWAY SHIELD
	NON PM SET (P.S.)		V.A.
	NON PM FOUND (P.F.)		V.M. ACCESSIBLE (MANHOLE IDENTIFICATION)
	DECK, SIGN POST		HO SIGN
	DECK, WATER OBSTRUCTION		PROPOSED SIGN POST
	CONCRETE ISLAND		STREET STOP
	STREET, UTILITY POLE		CONCRETE ISLAND
	STREET, TELEPHONE POLE		EXCLUDED CURB
	STREET, GAS POLE		CURB & GUTTER
	ELECTRICAL ENCLOSURE		TRAFFIC ARROW
	LANE, WATER METER		TURN LANE ARROW
	STREET, UTILITY POLE		MANHOLE NUMBER
	LANE, FIRE HYDRANT		DRAINAGE STRUCTURE DISPOSITION
	PORT, MANHOLE VALVE		DRAINAGE PIPE DISPOSITION
	BLOW OFF VALVE		BP TAP
	MANHOLE		MANHOLE, FLOW ARROW
	REMOVE FIRE DEPT. CONNECTION		SILT FILTER PROTECTION
	CONCRETE THRUWAY BLOCK		PROPOSED SPOT ELEVATION
	DOUBLE DETECTION CHECK VALVE		SPOT ELEVATION
	FIRE DEPT. CONNECTION		STORM/STORM FLOW DIRECTION
	FIRE HYDRANT		CATCH BASIN
	GATE VALVE & BOX		CURB SILT
	WATER METER		AREA SIGN
	GAS METER		MANHOLE
	SMOKE TRAP		WOOD MANHOLE
	EXTERIOR ELEVATION		CONCRETE WALL
	MANHOLE		TYPE-II MANHOLE
EXISTING PHONE	_____ PH _____		
EXISTING ELECTRIC	_____ CH _____		
PROPERTY LINE	_____		
BOUNDARY	_____		
RIGHT OF WAY	_____ ROW _____		
EXISTING CONTROL SLY FENCE	_____ SF _____ SF _____		
EXISTING EEL	_____ E _____ E _____		
EXISTING THERIAKE	_____		
EXISTING FENCELINE	_____ X _____ X _____		
MANHOLE BUILDING OUTBACK LINE	_____ MBL _____		
PAVE BOUNDARY	_____		
EXISTING GAS LINE	_____ GAS _____		
PROPOSED GAS LINE	_____ GAS _____		
EXISTING STORM	_____ STM _____		
PROPOSED STORM	_____ STM _____		
EXISTING CONTOUR LINE	_____ 50 _____		
PROPOSED CONTOUR LINE	_____ 501 _____		
EXISTING SANITARY SEWER	_____ SS _____ SS _____		
PROPOSED SANITARY SEWER	_____ SS _____ SS _____		
EXISTING WATER	_____ W _____ W _____		
PROPOSED WATER	_____ W _____ W _____		
FOURMAN	_____ FM _____ FM _____		
FOURMAN RETURN	_____ FMR _____ FMR _____		
FLOODWAY	_____ FW _____ FW _____		

**SEC, Inc.**

150 MIDTOWN TOWER, SUITE 1500, MEMPHIS, TENNESSEE 38103  
 PHONE: (901) 526-1100 FAX: (901) 526-1101  
 WE OFFER A FULL RANGE OF SERVICES IN THE FIELD OF ENVIRONMENTAL ENGINEERING AND CONSTRUCTION.

**SITE ENGINEERING CONSULTANTS**  
 FOUNDATIONS • GEOTECHNICAL • LAND PLANNING  
 LANSING ARCHITECTURE

**Hilltop Ridge Treatment Facility**

Montgomery County, Tennessee

**Wastewater Collection Plan**

1"=50'

21506



### Grading and Drainage Notes:

1. The site work contractor shall coordinate the installation of all underground utilities with the work. All underground utilities (water, sanitary sewer, storm sewer, electrical conduit, irrigation conduits, and any other miscellaneous underground utilities, ducts, or structures), shall be in-place prior to the placement of base course material.
2. The contractor shall not disturb pavement or necessary to ensure a smooth fit and maintain grade.
3. The contractor shall verify horizontal and vertical location of all existing storm sewer structures, pipes and all utilities prior to construction.
4. Clearing and grubbing limits shall include all areas disturbed by grading operations.
5. Any graded or disturbed areas shall have 4 inches of topsoil, seed, mulch, fertilizer and water applied until a healthy stand of grass is achieved. The restoration shall closely follow construction.
6. The property shown herein is in The Maps Map 100, Parcel 81.00, Grid District 17, Highwater District in Montgomery County, as recorded in Record 18-2116, Pg. 5852.
7. All cut/slope and drainage easements shall be established to the satisfaction of the Montgomery County Engineering Department. If establishment is not achieved by seeding or sodding, then more stringent measures such as erosion control fabric, permanent turf reinforcement matting or concrete lining shall be used.
8. Contact the Montgomery County Engineering Department at 851-555-5115 in request permits to perform work within the public right-of-way.
9. Any improvements or modifications within the public right-of-way require the approval of the Montgomery County Highway Department.

### Erosion Control Notes:

1. The site contractor is responsible for establishing and maintaining suitable erosion and sediment control devices on-site during construction as required to prevent soil from leaving site. EEC will not be allowed beyond construction limits.
2. The contractor is responsible for removing all from site if not reusable on-site and covering plan exposure and grade in all phases of construction.
3. The contractor is responsible for clearing out of storm drainage structures, including storm, pipes, etc., prior to completion of this project.
4. Erosion control shall be provided for all cut and fill operations within the limits of the construction site, throughout the construction period to provide the site with maximum protection from erosion at all times.
5. Erosion control measures are to be installed prior to any grading on-site and are to be maintained in place until stabilization of erodible soils has been accomplished.

### General Utility Notes:

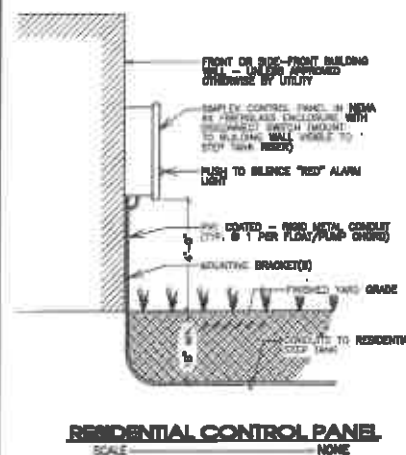
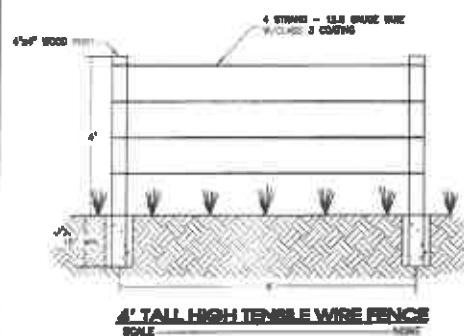
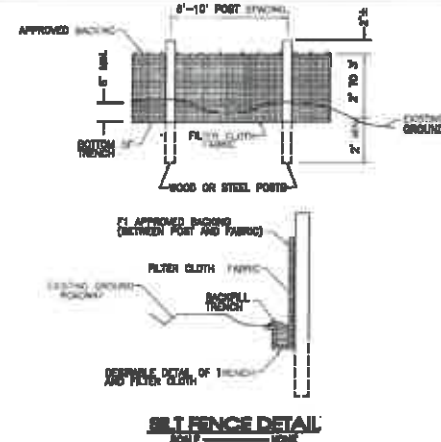
1. Existing utility lines shown are approximate locations only. The contractor shall field verify all existing utility lines location prior to any construction. Any deviations from the design location shall be reported to the owner or engineer prior to beginning construction.
2. The contractor will provide all necessary protective measures to safeguard existing utilities from damage during construction of this project. In the event that exposed equipment is required to work over and around the utilities, the contractor will be required to furnish such equipment. The cost of providing utilities from damage and furnishing special equipment will be included in the price bid for other items of construction.
3. The contractor shall notify each individual utility owner of his plan of operation in the area of the utilities, prior to commencing work. The contractor shall contact the utility owners and request them to properly locate their respective utility on the ground. This notification shall be given at least three (3) business days prior to commencement of operations around the utility.
4. The contractor shall refer to engineer's plans and specifications for actual location of all utility structures to include sanitary sewer, storm, domestic water, and electrical service. The contractor shall coordinate installation of utilities in such a manner as to avoid conflicts and ensure proper depths are achieved as well as coordinating with the regulatory agency as to location and scheduling of the in-the-trenches to their facilities.
5. All underground utilities (water, sewer, storm sewer, electrical conduit, irrigation conduits, and any other miscellaneous), shall be in-place prior to the placement of base course material.
6. Location of site utilities shall be verified with proper utility company providing service.
7. In Tennessee it is a requirement per "the underground utility damage prevention act" that anyone who engages in excavation must notify of known utility owners, no less than three nor more than ten working days, prior to their intended excavation. A list of these utility owners may be obtained from the county register of deeds these utility owners who participate in the Tennessee one call system can be notified toll free at 1-800-387-1111.

### S.T.E.P. System General Notes:

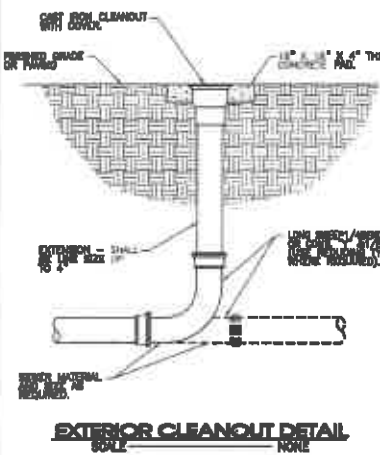
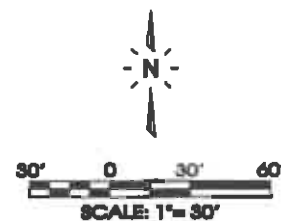
1. The location of treatment system components as shown are general in nature. Minor field adjustments may be necessary. The contractor may request to modify the location of the components through the owner and the Tennessee Division of Water Pollution Control.
2. This design is for the disposal of wastewater collected from Hilltop Ridge Treatment Facility design flow.
3. All flows for this system shall be controlled and monitored by PWT-1202-80-1802 model control panel and adaptable with Haskell/Heck Monitoring System). The monitoring shall be considered the flow meter for this system.
4. The minimum horizontal separation between the closest two points of the water and sewer line is ten (10) feet. The minimum vertical separation between the closest two points of the water and sewer line shall be 18 inches, with waterlines being above sewerlines.
5. Contractor shall comply with the most current requirements, specifications, and detail drawings for the installation of S.T.E.P. system installation based on certified per specifications of T.W.A.
6. All trenches, pipe laying, and backfilling shall be in accordance with federal D.H.H.A. regulations.
7. Utility contractor shall have approval of all governing agencies having jurisdiction over this system prior to installation.
8. All tanks shall be one-piece, structurally sound, watertight tanks as manufactured by Jarrell Concrete Products, or approved equal.
9. Testing procedure for water tightness is as follows: Fill tank 2" into the rim. After a period of 24 hours, the water level should have lowered no more than 1/8".
10. Collection foreman shall be 24", 4" or 6" SDR17 green PVC pipe (water to be coordinated with Tennessee Waterworks). Foreman shall be tested and rated for a 150 PSI working pressure.

### Site Notes:

1. Contractor shall immediately notify the engineer of any discrepancies found between these plans, and/or field conditions prior to construction.
2. Apparent errors, discrepancies, or omissions on the drawing shall be brought to the attention of the owner prior to bid submittal. The contractor may not use apparent errors, discrepancies, or omissions present on the drawings presented for bidding for additional charges after bids have been submitted. The architect shall be permitted to make corrections and interpretations as may be deemed necessary for the fulfillment of the intent of the contract documents.
3. The contractor shall obtain all improvements using the geographic data provided in the drawings. It is the site responsibility of the contractor to completely state and check all improvements to ensure adequate performance, both horizontal and vertical, prior to the installation of any improvements. No digital file will be provided.
4. The notes and plans shown will attention to certain required features of the construction but do not claim to cover all details of design and construction. The contractor shall furnish and install the work complete and ready for operation.
5. After completion of construction, the contractor shall perform site cleanup to remove all trash, debris, excess materials, equipment, and other deleterious materials associated with construction. The contractor is expressly responsible for ensuring the site is clean and in operable condition at the time of final acceptance.
6. The contractor is responsible for the protection and replacement of all property plots on this site.
7. These drawings are intended for use on this site only and as an integral part of this specific project. These drawings may not be used in whole or in part on any other project under the professional engineer's seal. The owner shall hold harmless and indemnify the architect and engineer from and against any and all claims of any nature whatsoever arising from such use.
8. A separate R.O.S. Erosion Permit issued from Montgomery County shall be required for any excavation or construction in the public R.O.S.



RECYCLING SAND FILTER  
GRADING PLAN  
SCALE 1"=30'



**SEC, Inc.**  
ENGINEERING - SURVEYING - LAND PLANNING  
101 MIDDLE TENNESSEE BOULEVARD  
MEMPHIS, TENNESSEE 38128  
PH: 901.521.1111 FAX: 901.521.1112  
WWW.SEC-INC.COM  
REGISTERED PROFESSIONAL ENGINEER  
REGISTERED PROFESSIONAL SURVEYOR  
REGISTERED PROFESSIONAL LAND PLANNER  
REGISTERED PROFESSIONAL ARCHITECT  
REGISTERED PROFESSIONAL INTERIOR DESIGNER  
REGISTERED PROFESSIONAL ENVIRONMENTAL ENGINEER  
REGISTERED PROFESSIONAL ELECTRICAL ENGINEER  
REGISTERED PROFESSIONAL MECHANICAL ENGINEER  
REGISTERED PROFESSIONAL CHEMICAL ENGINEER  
REGISTERED PROFESSIONAL CIVIL ENGINEER  
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REGISTERED PROFESSIONAL NUCLEAR ENGINEER  
REGISTERED PROFESSIONAL AERONAUTICAL ENGINEER  
REGISTERED PROFESSIONAL AGRICULTURAL ENGINEER  
REGISTERED PROFESSIONAL BIOMEDICAL ENGINEER  
REGISTERED PROFESSIONAL CERAMIC ENGINEER  
REGISTERED PROFESSIONAL COMPOSITES ENGINEER  
REGISTERED PROFESSIONAL CONSTRUCTION ENGINEER  
REGISTERED PROFESSIONAL ENVIRONMENTAL ENGINEER  
REGISTERED PROFESSIONAL FOOD ENGINEER  
REGISTERED PROFESSIONAL FURNITURE ENGINEER  
REGISTERED PROFESSIONAL GLASS ENGINEER  
REGISTERED PROFESSIONAL GRAPHIC ENGINEER  
REGISTERED PROFESSIONAL HUMAN FACTORS ENGINEER  
REGISTERED PROFESSIONAL INDUSTRIAL ENGINEER  
REGISTERED PROFESSIONAL JEWELRY ENGINEER  
REGISTERED PROFESSIONAL LEATHER ENGINEER  
REGISTERED PROFESSIONAL LUMBER ENGINEER  
REGISTERED PROFESSIONAL MARINE ENGINEER  
REGISTERED PROFESSIONAL MATERIALS ENGINEER  
REGISTERED PROFESSIONAL MECHANICAL ENGINEER  
REGISTERED PROFESSIONAL METALLURGICAL ENGINEER  
REGISTERED PROFESSIONAL MINING ENGINEER  
REGISTERED PROFESSIONAL NUCLEAR ENGINEER  
REGISTERED PROFESSIONAL OIL ENGINEER  
REGISTERED PROFESSIONAL POLYMER ENGINEER  
REGISTERED PROFESSIONAL POWER ENGINEER  
REGISTERED PROFESSIONAL RAILROAD ENGINEER  
REGISTERED PROFESSIONAL ROCKET ENGINEER  
REGISTERED PROFESSIONAL SAFETY ENGINEER  
REGISTERED PROFESSIONAL SEMICONDUCTOR ENGINEER  
REGISTERED PROFESSIONAL SHIPPING ENGINEER  
REGISTERED PROFESSIONAL SINTERING ENGINEER  
REGISTERED PROFESSIONAL SPECIALTY ENGINEER  
REGISTERED PROFESSIONAL THERMAL ENGINEER  
REGISTERED PROFESSIONAL TRANSPORTATION ENGINEER  
REGISTERED PROFESSIONAL URBAN ENGINEER  
REGISTERED PROFESSIONAL VEHICLE ENGINEER  
REGISTERED PROFESSIONAL WELDING ENGINEER  
REGISTERED PROFESSIONAL WOOD ENGINEER  
REGISTERED PROFESSIONAL YACHT ENGINEER

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MEMPHIS, TENNESSEE 38128  
PH: 901.521.1111 FAX: 901.521.1112  
WWW.SEC-INC.COM

**Hilltop Ridge Treatment Facility**

Montgomery County, Tennessee

REVISIONS

DATE: 1-24-2025

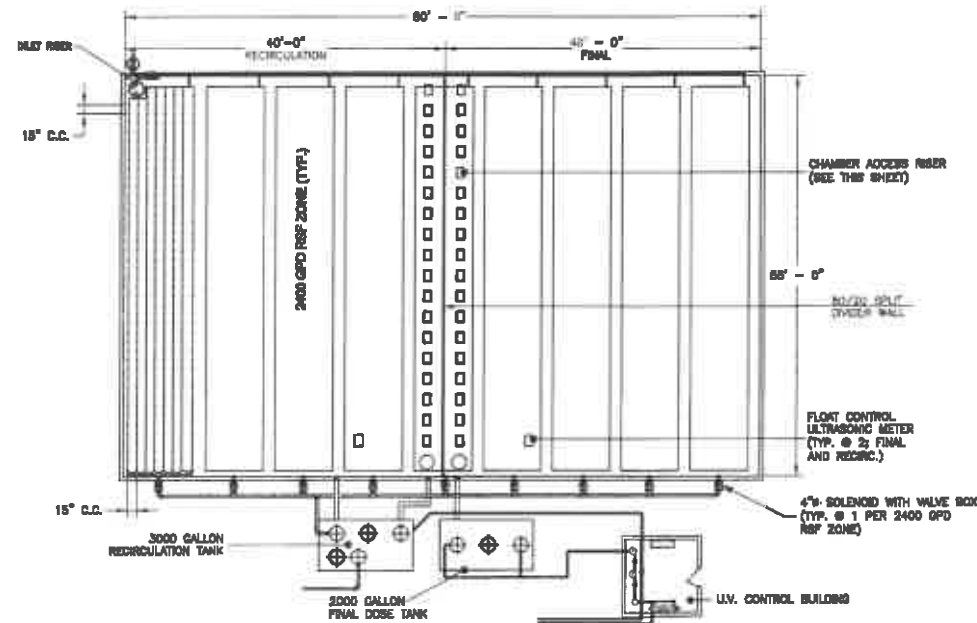
OVERSIGHT

FILE NAME: 1001111111\_1001111111

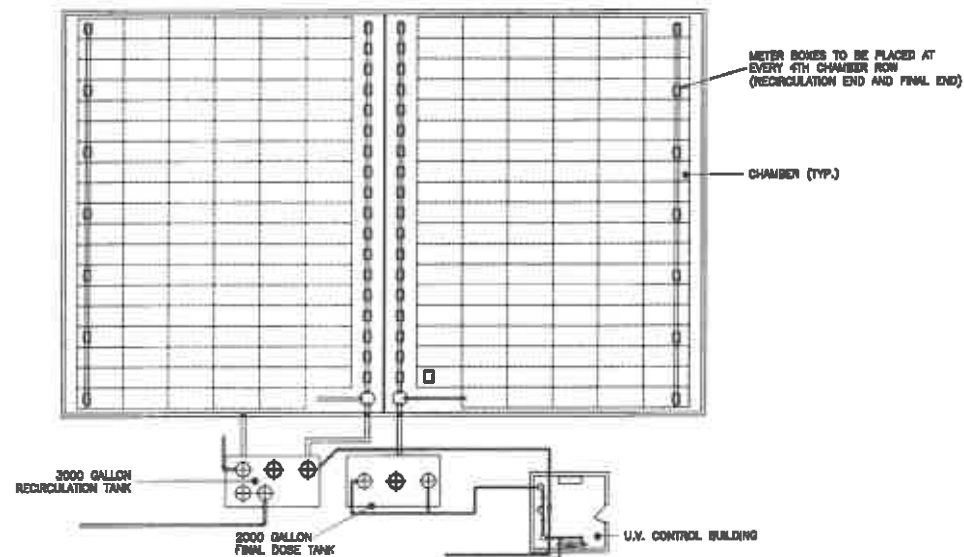
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JOB NO. 21506

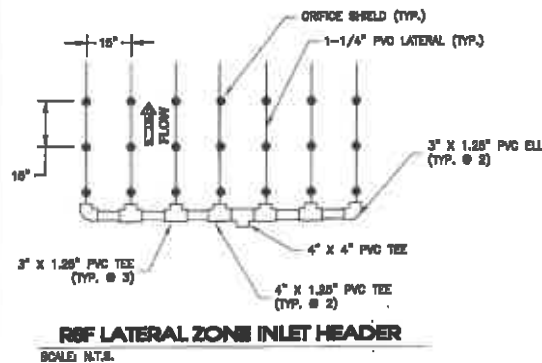
SHEET: C2.0



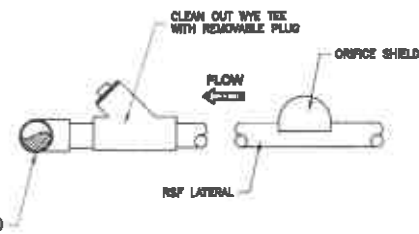
**RECIRCULATING SAND FILTER - PLAN**  
SCALE: N.T.S.



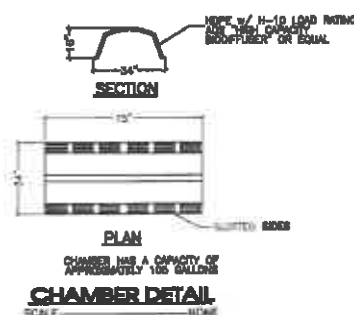
**RECIRCULATING SAND FILTER CHAMBER LEVEL - PLAN**  
SCALE: N.T.S.



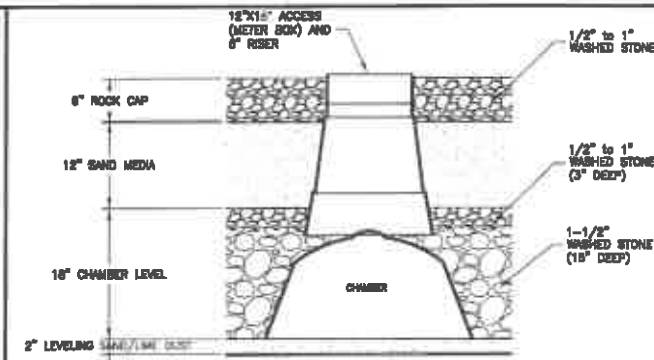
**RSF LATERAL ZONE INLET HEADER**  
SCALE: N.T.S.



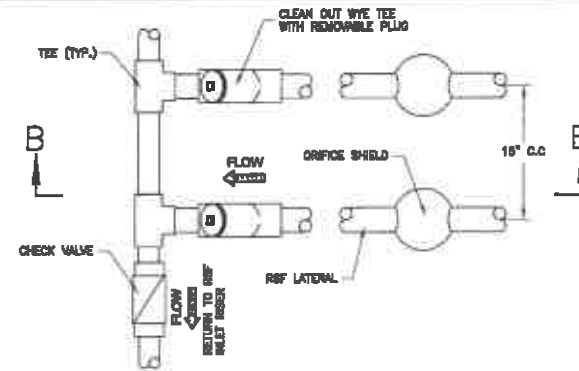
**SECTION B-B**  
N.T.S.



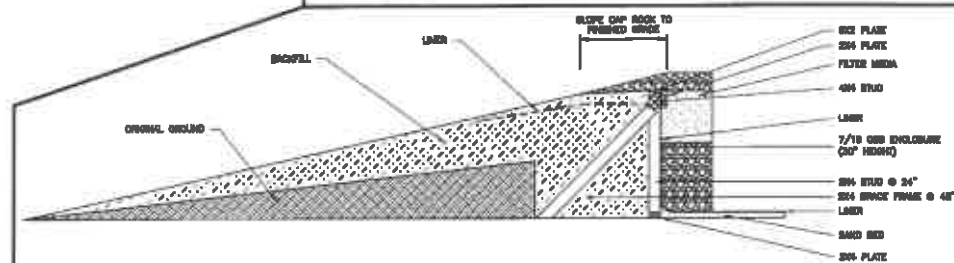
**CHAMBER DETAIL**  
SCALE: NONE



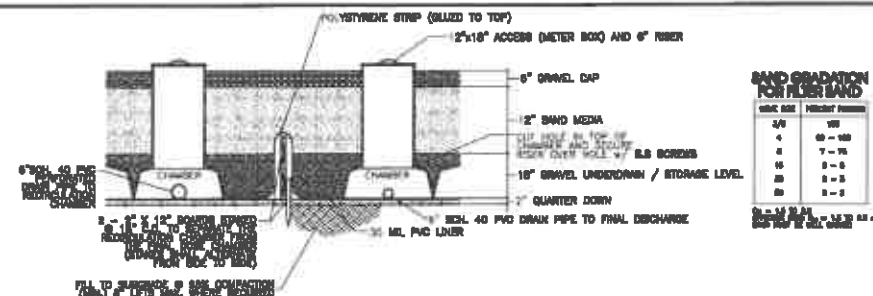
**CHAMBER ACCESS RISER**  
SCALE: N.T.S.



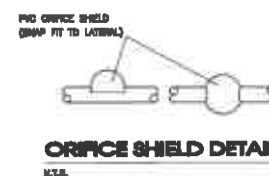
**RSF LATERAL ZONE FLUSH HEADER**  
SCALE: N.T.S.



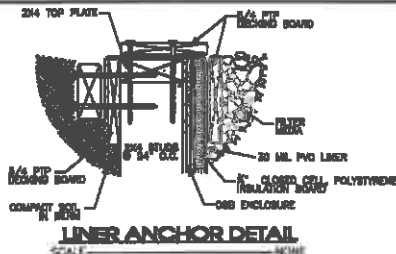
**RSF BERM ENCLOSURE**  
SCALE: N.T.S.



**FILTER DIVIDER WALL**  
SCALE: NONE



**ORIFICE SHIELD DETAIL**  
SCALE: N.T.S.



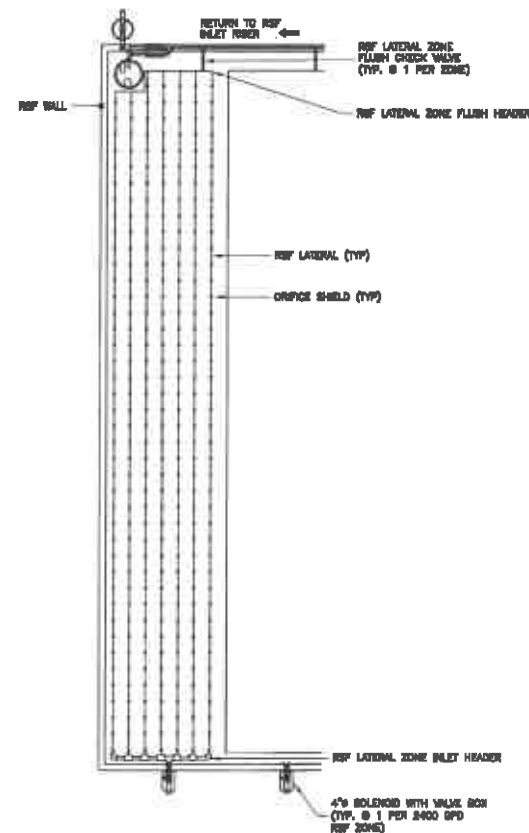
**LINER ANCHOR DETAIL**  
SCALE: NONE

**SITE ENGINEERING CONSULTANTS**  
ENGINEERING - SURVEYING - LAND PLANNING  
**SEC, Inc.**  
303 N. WILSON ST. SUITE 200  
MONTGOMERY, ALABAMA 36102  
TEL: (205) 261-1111 FAX: (205) 261-1112  
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**Hilltop Ridge Treatment Facility**  
Montgomery County, Tennessee

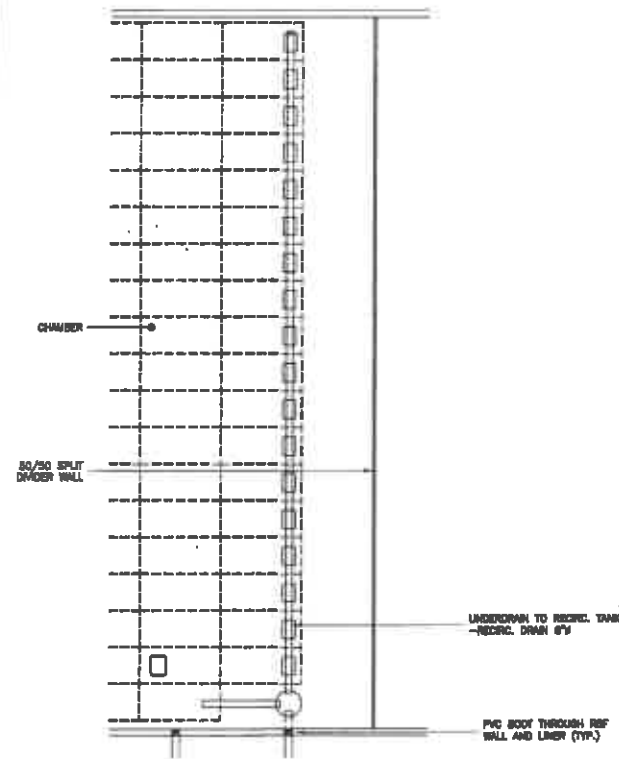
**Details**

DATE: 1-28-2022  
CHECKED: JPM  
FILE NAME: STRONGHOLD\_WTP  
SCALE: NTS  
JOB NO.: 21508  
SHEET: C2.1

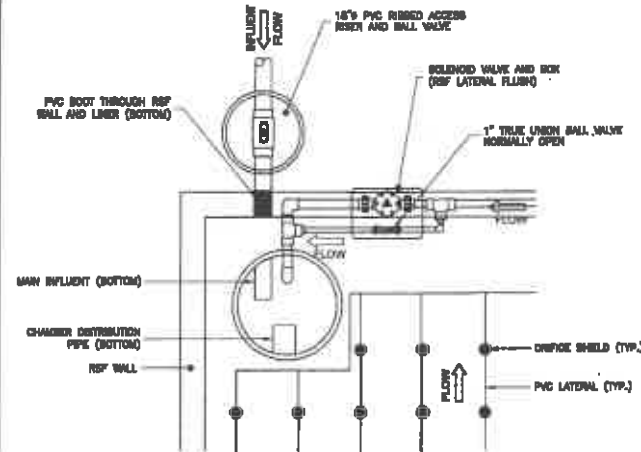


**2400 GPD REF ZONE(55) - PLAN**  
SCALE: N.T.S.

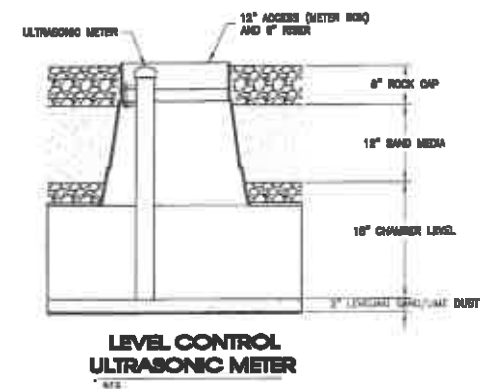
STANDARD 3000 GPD REF TREATMENT ZONE - 55 FT. DIA.  
NUMBER OF LATERALS: 7  
LATERAL DIAMETER: 1-1/4"  
NUMBER OF ORIFICE/LATERAL (/ZONE): 48 (24)  
4\"/>



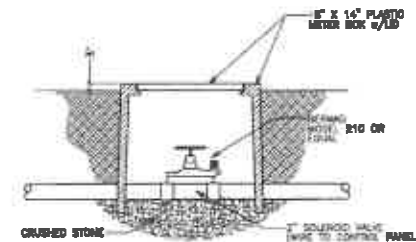
**2400 GPD REF ZONE(55) - CHAMBERS**  
SCALE: N.T.S.



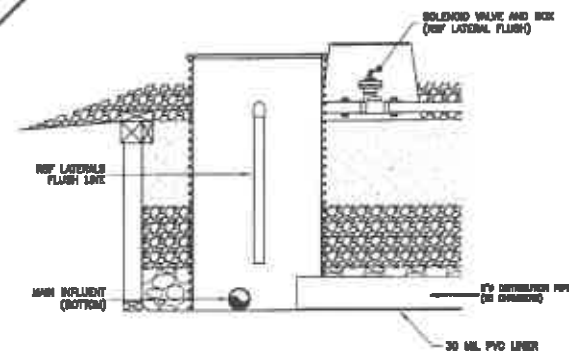
**INLET RISER - PLAN**  
SCALE: N.T.S.



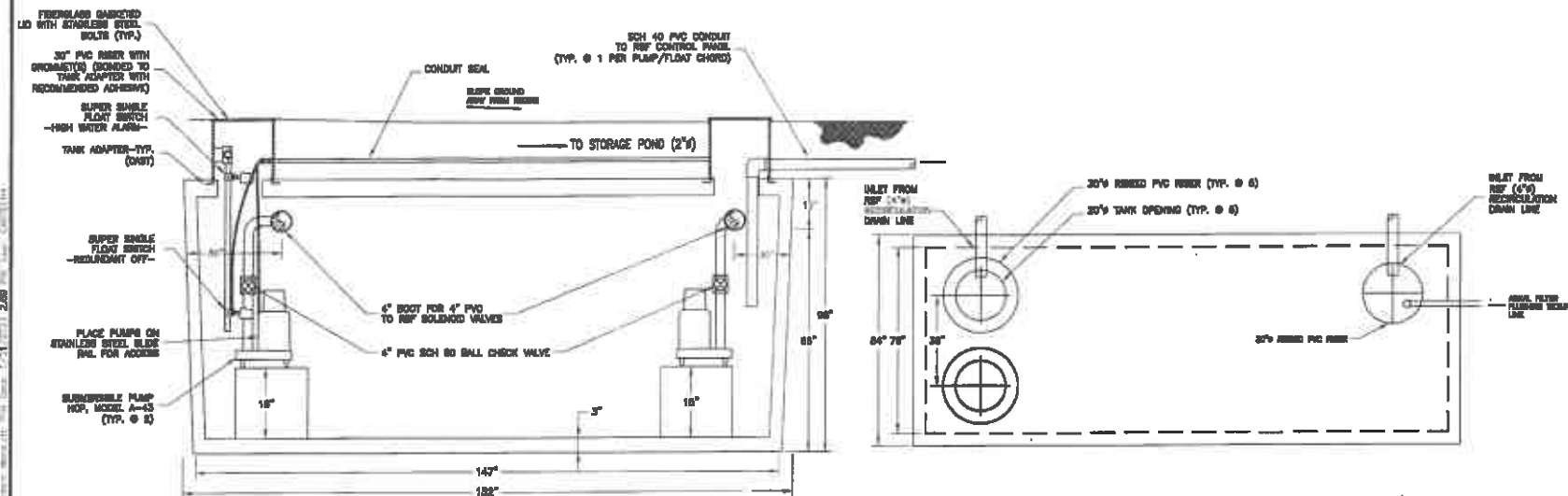
**LEVEL CONTROL  
ULTRASONIC METER**  
N.T.S.



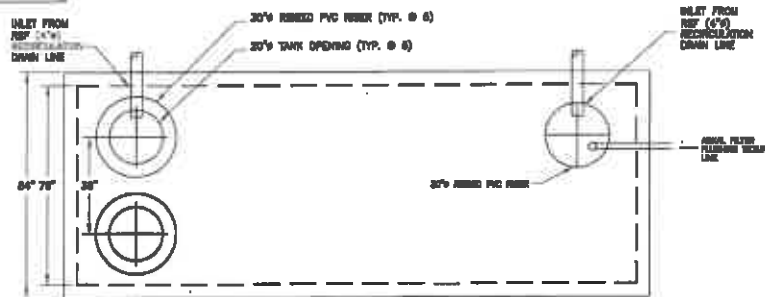
**ELECTRIC SOLENOID VALVE**  
SCALE: NONE



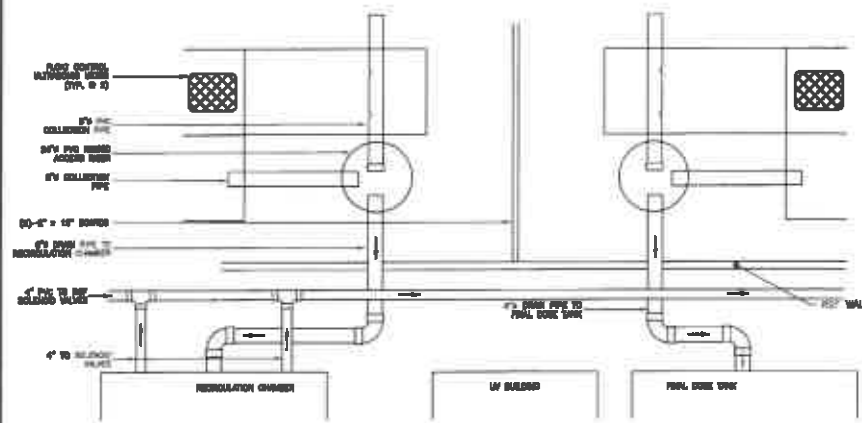
**INLET RISER**  
N.T.S.



**3,000 GALLON RECIRCULATION CHAMBER**  
N.T.S.



**3,000 GALLON RECIRCULATION CHAMBER - PLAN**  
N.T.S.



**EFFLUENT RISER - PLAN**  
N.T.S.

**SEC, Inc.**  
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LANDSCAPE ARCHITECTURE  
800 ARKLETT TUNNISHILL BOULEVARD MEMPHIS, TENNESSEE 38125  
PHONE: (901) 892-7901 FAX: (901) 892-2557  
E-MAIL: FREED@SEC-CIVIL.COM  
SEC IS AN EQUAL OPPORTUNITY EMPLOYER  
The City of Memphis is hereby authorized to use the information contained herein for the purpose of planning, designing, constructing, and maintaining the wastewater treatment facility at Hilltop Ridge, Tennessee. The City shall not be responsible for any errors or omissions in the information provided herein.



# Hilltop Ridge Treatment Facility

DRIVING: MLO  
DATE: 1-25-2008  
CHECKED:  
FILE NAME:  
21506/Hilltop\_RTP  
SCALE:  
N.T.S.  
JOB NO.  
21506  
SHEET:

**C2.2**

Montgomery County, Tennessee



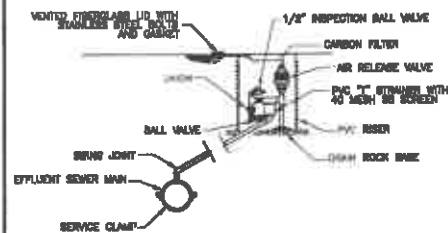


ALL TANKS SHALL BE ONE-PIECE,  
STRUCTURALLY SOUND, WATERTIGHT TANKS  
AS MANUFACTURED BY JARRETT CONCRETE  
PRODUCTS, OR APPROVED EQUAL

### TYPICAL STUD FOR EXTENSION

ON COLLECTION LINES 4", AND SMALLER, SCH40 P40 BALL VALVES WILL BE USED.

ON COLLECTION LINES 6", AND LARGER, FLOWMASTER MECHANICAL JOINT ISOLATE HEAD VALVES, OR EQUAL WILL BE USED.

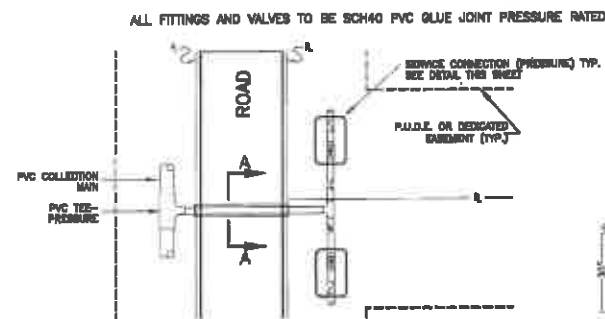


**TYPICAL AUTOMATIC  
AIR RELEASE VALVE (AARV)**

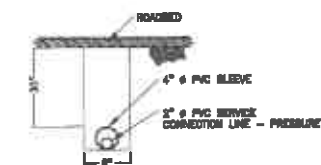
THE 1/2" BALL VALVE IS USED TO VERIFY THAT THE AUTOMATIC AIR RELEASE VALVE IS OPERATIONAL. THE FLOWING OF A LARGE VOLUME OF AIR THROUGH THE 1/2" BALL VALVE DURING OPERATION INDICATES THAT THE VALVE AND STRAINER SHOULD BE REMOVED AND CLEANED.

A PRESSURE GAUGE CAN BE THREADED INTO THE OUTLET END OF THE 1/2" BALL VALVE TO OBSERVE SYSTEM LINE PRESSURE.

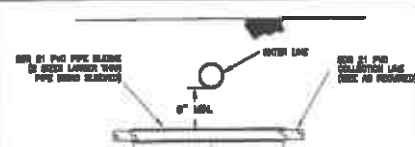
ALL COMPONENTS ARE RATED FOR A 150 PSI WORKING PRESSURE.



### TYPICAL ROAD CROSSING SERVICE CONNECTION

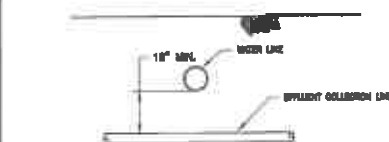


**SECTION A-A**  
**HTS**



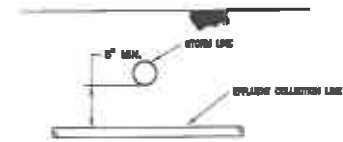
**TYPICAL SEWER - WATER  
LINE CROSSING (WITH SLEEVE)**

\*\* ONLY IF (MIN.) OF SEPARATION MUST BE MAINTAINED IF SINKER LINE IS  
ELIEVED 10" (MIN.) BEYOND BOTH SIDES OF CHOCKING WITH WATER LINE.  
OTHERWISE, 1" (MIN.) OF SEPARATION MUST BE MAINTAINED.



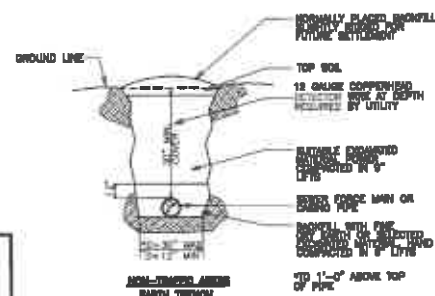
### TYPICAL SEWER - WATER LINE CROSSING

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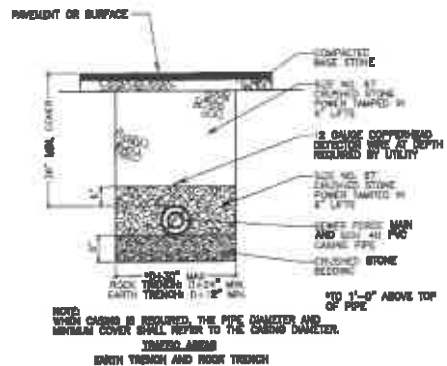
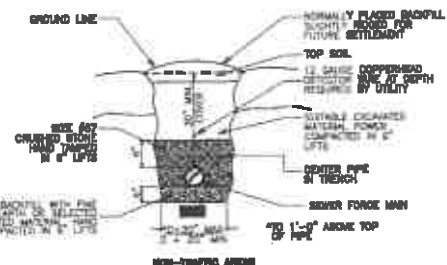
### TYPICAL SEWER - STORM LINE CROSSING

**DATE: M.T.B.**



### DRIP ZONE SUPPLY & RETURN LINES PIPE TRANCH DETAIL

SCALE: \_\_\_\_\_ NONE



**DIRT BEDDING #2**  
SCALE ————— NONE  
**COLLECTION PIPE**

**SITE ENGINEERING CONSULTANTS**

SEC, Inc.



## Hilltop Ridge Treatment Facility

**Montgomery County, Tennessee**

## Details

REVISION:	
DRAWN: MLD	
DATE: 1-28-2022	
CHECKED:	
JFR	
FILE NAME:	21508TNGA_STEP
SCALE:	NTS
JOB NO.	21506

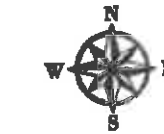
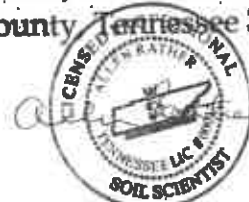
## C2.4

9/27/21 WPC Soil Map

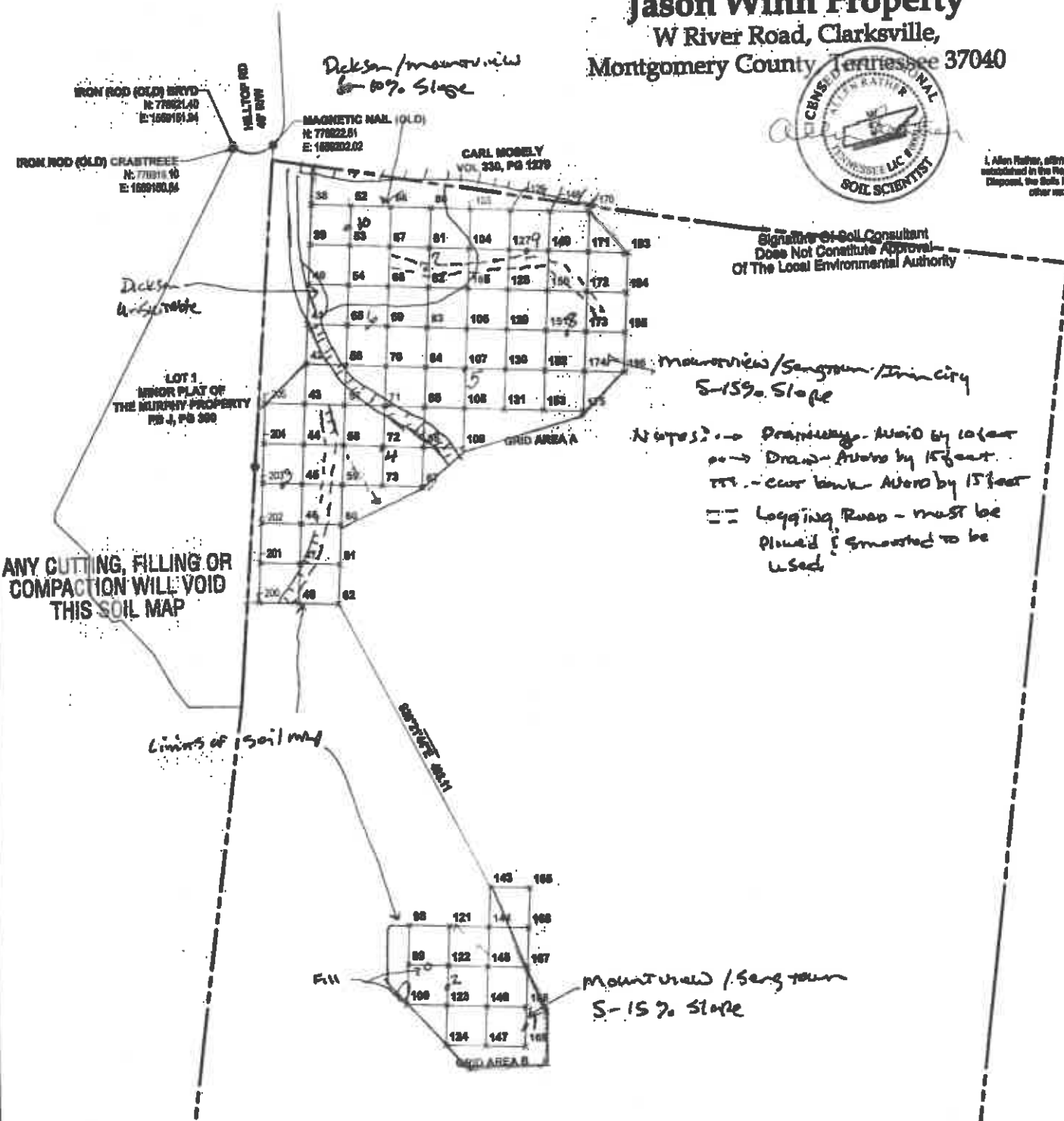
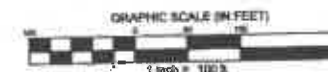
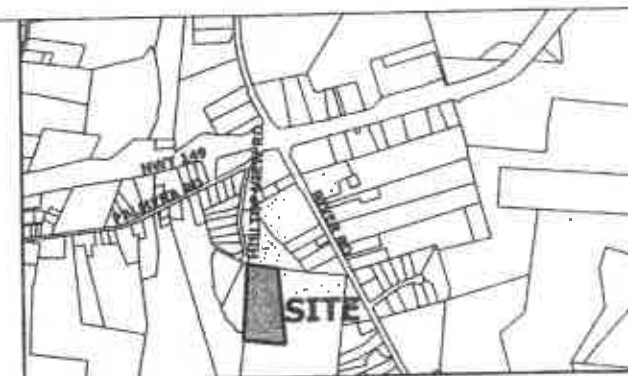
# Grid Stake Survey

Of a Portion of the  
Jason Winn Property

W River Road, Clarksville,  
Montgomery County, Tennessee 37040



North Based upon  
TN GPC MAG 88/94rd North  
Vertical Datum: NAD 83 (2011 ON)



ANY CUTTING, FILLING OR  
COMPACTION WILL VOID  
THIS SOIL MAP

Limits of Soil Map

GRID AREA A

GRID AREA B

MOUNTAIN VIEW / SENGSTON  
5-15% Slope

Symbol Legend	Boundary Line
IRON ROD (OLD)	Adjoiner's Line
CATCH BASIN	Grid Line
QUARTER ANGLE	
IRON ROD (NEW)	
UTILITY POLE	

## MAP REFERENCE

The subject property is identified as parcel ID 144 104.05 on the Montgomery County, Tennessee Property Map.

## DEED REFERENCE

Owner: Jason Winn (a portion thereof), as recorded in Volume 1779, page 2234, Register Office, Montgomery County, Tennessee.

## SURVEYOR'S NOTES

- The Subject Area is located in the 17th Civil District of Montgomery County, Tennessee.
- The subject parcel lays within an area designated as "Zone X" (No Special Flood Hazard Area, some of 0.2% annual chance flood) as noted on the current FEMA Flood Community Panel, 47125C0400D. This was determined by visual spotting methods using the current FEMA Panel.
- Source information from plans and mappings, combined with observed evidence of utilities found at time of survey were used to develop the view of underground utilities shown herein. However, lacking observation, the exact location of underground utilities cannot be accurately, completely, and reliably depicted. In addition, to locate utilities, 8" or larger diameter utility locates require that surveyors may be required to use in an appropriate manner. Where additional or more detailed information is required, the client is advised that excavation and/or private utility locate request may be necessary. Verification of existence, size, location and depth should be confirmed with the appropriate utility source.
- A Title Report was not provided for the preparation of this survey. Therefore, this survey is subject to the findings of an accurate title search.
- No Brown determinations were provided to this surveyor. Therefore this survey does not address the existence or non-existence of any water of the state, pre-flooded stream bed, or wetlands.
- This survey does not address the extent of any power or cables any adverse effect of ownership of any adjoining property. Removal of any property line fence should be coordinated with adjacent owner.
- The Subject Area is currently Zoned AG, according to current zoning, verify with local Zoning Authority prior to construction and/or design services.
- The Surveyor's Liability for this document shall be limited to the original purchaser, and does not extend to any un-surveyed persons or entities without an express re-certification by the surveyor whose name appears herein.
- Grid Lines are 30' x 30' Typical.
- Grid Map Area A: 132,500 SQ FT or 3.04 Acres.  
Grid Map Area B: 22,500 SQ FT or 0.52 Acres.  
Total Grid Area: 155,000 SQ FT or 3.56 Acres.
- This Grid Map is set for as High Intensity Soil Map.
- This survey is solely for Soil Mapping Purposes only.

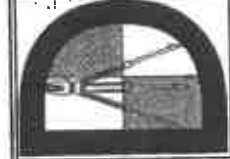
## SURVEYOR'S CERTIFICATE

I hereby certify that this survey was actually made on the ground under my direct supervision, using the latest recorded deeds, and other information; that there are no encroachments or projections other than those shown; and that this survey complies with the minimum requirements for a Category 1 Urban Land Survey pursuant to Chapter 020-3, Section 05 of the Department of Business Standards of Practice for Land Surveyors; and that this survey is true and correct to the best of my knowledge and belief.

Matthew Dhority, TN L.S. # 2727



MATT DHORITY, RLS  
REGISTERED LAND SURVEYOR  
2867 BRUNSWICK DR., CLARKSVILLE, TN, 37043  
EMAIL: MATT.DHORITY@GMAIL.COM  
TELEPHONE: (615) 948-9091  
www.mdsurveying.com



Issue Date: 08-02-2021  
Project ID:  
Drafted By:  
Checked By:

Sheet Title:

Grid Stake  
Survey

Sheet No.  
V-1.00